What is Claimed

~~CLAIMS~~

1. A miniature inverted-repeat transposable element (MITE)-like element capable of causing duplication of the target sequence: (A)nG(A)n [n being an integer of not less than 1] at the site of insertion thereof in a genomic gene.

2. A MITE-like element as claimed in Claim 1 which has perfect or imperfect terminal inverted repeat sequences in the 5' and 3' terminal regions.

3. A MITE-like element as claimed in Claim 1 or 2 which contains, in the sequence thereof, a plurality of repetitions of at least one of the nucleotide sequences represented by the formula (1): XttgcaaY (wherein X represents g or t and Y represents a or c) or the formula (2): Zatgcaa (wherein Z represents t or a).

4. A MITE-like element as claimed in any of Claims 1 to 3 which has, as terminal inverted repeat sequences, a nucleotide sequence shown under SEQ ID NO:1 in the 5' terminal region and a nucleotide sequence shown under SEQ ID NO:2 in the 3' terminal region.

5. A MITE-like element comprising the nucleotide sequence shown under SEQ ID NO:3.

6. A MITE-like element which has, as terminal inverted repeat sequences, a nucleotide sequence shown under SEQ ID NO:4 in the 5' terminal region and a nucleotide sequence shown under SEQ ID NO:5 in the 3' terminal region, and is capable of causing duplication of the target sequence TA at the site of insertion thereof in a genomic gene.

7. A MITE-like element comprising the nucleotide sequence shown under SEQ ID NO:6.

8. A transcriptional activation element characterized by containing at least one transposable element.

9. A transcriptional activation element as claimed in Claim 8, wherein the transposable element is a MITE-like element.

10. A transcriptional activation element as claimed in Claim 9, wherein the transposable element comprises at least one MITE-like element comprising the following DNA (a) or (b):

(a) a DNA having the nucleotide sequence shown under SEQ ID NO:1;

(b) a DNA capable of hybridizing with a DNA having the above nucleotide sequence (a) under stringent conditions and coding for a MITE-like element capable of causing duplication of (A)nG(A)n [n being an

integer of not less than 1] at the site of insertion thereof in a genomic gene,

or a MITE-like element comprising the following DNA (c) or (d):

(c) a DNA having the nucleotide sequence shown under SEQ ID NO:2;

(d) a DNA capable of hybridizing with a DNA having the above nucleotide sequence (c) under stringent conditions and coding for a MITE-like element capable of causing duplication of TA at the site of insertion thereof in a genomic gene.

11. A transcriptional activation element as claimed in Claim 9, wherein the transposable element is a tandem coupling product from a MITE-like element comprising the following DNA (a) or (b):

(a) a DNA having the nucleotide sequence shown under SEQ ID NO:1;

(b) a DNA capable of hybridizing with a DNA having the above nucleotide sequence (a) under stringent conditions and coding for a MITE-like element capable of causing duplication of (A)nG(A)n [n being an integer of not less than 1] at the site of insertion thereof in a genomic gene,

and a MITE-like element comprising the following DNA (c) or (d):

(c) a DNA having the nucleotide sequence shown under SEQ ID NO:2;

(d) a DNA capable of hybridizing with a DNA having the above nucleotide sequence (c) under stringent conditions and coding for a MITE-like element capable of causing duplication of TA at the site of insertion thereof in a genomic gene.

12. A transcriptional activation element comprising a DNA having the nucleotide sequence shown under SEQ ID NO:3.

13. A transgene expression cassette which comprises the transcriptional activation element of any of Claims 8 to 12, and a DNA sequence operatively joined to said element.

14. A transgene expression cassette as claimed in Claim 13, wherein the DNA sequence operatively joined to the transcriptional activation element comprises a promoter and/or a terminator.

15. A transgene expression cassette as claimed in Claim 14, which further comprises, as the DNA sequence operatively joined to the transcriptional activation element, a desired transgene sequence to be expressed.

16. A plasmid containing the transcriptional activation element of any of Claims 8 to 12.

17. A plasmid containing the transgene expression cassette of any of Claims 13 to 15.

18. A transgenic plant which contains the transgene expression cassette of any of Claims 13 to 15.

19. A transgenic plant as claimed in Claim 18 which is corn, rice, wheat, lily, chrysanthemum, cotton, soybean, beet, potato or carica papaya.